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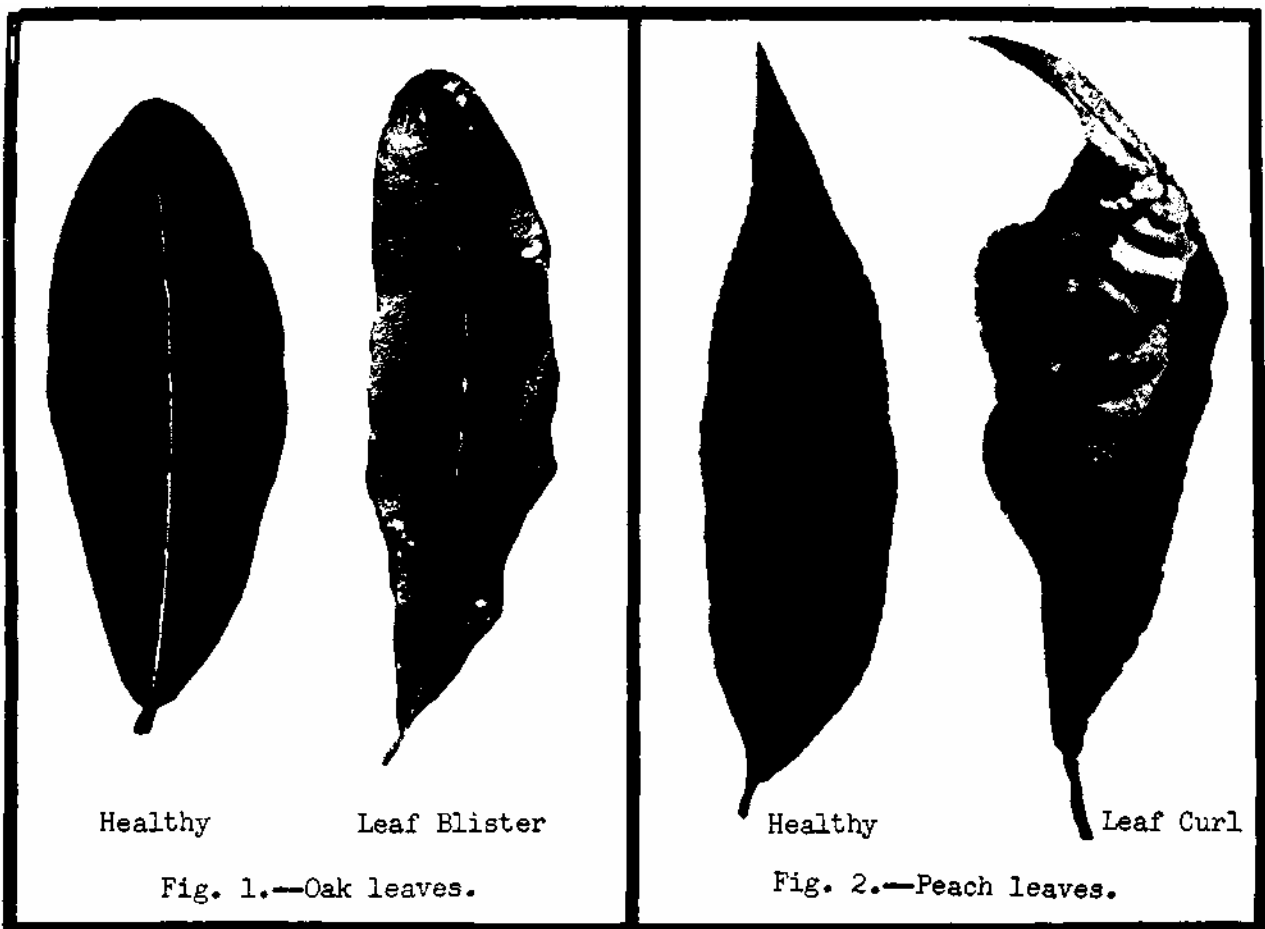
# LEAF BLISTER OF OAK

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Leaf Blister of Oak (Fig. 1) is caused by the fungus *Taphrina caefulescens* (M.D.) Tul. The genus *Taphrina* is also responsible for many other leaf blisters, peach leaf curl (Fig. 2), and other leaf curls and leaf pockets. Oak leaf blister is present on many species of oak in Florida. Environmental conditions are important in determining the severity of this disease, cool, wet springs being most favorable for development of this fungus. Oak species vary considerably in susceptibility; the southern red oak (*Quercus falcata*) is one of the most severely affected and may be completely defoliated.

**SYMPTOMS.** Blisters begin on new leaves as gray areas on the underside and yellow chlorotic spots on the upper side. In a short time a blister forms with the convex part on the upper surface of the leaves. Generally blisters are 1/4 to 1/2 inch in diameter and sometimes coalesce to cause leaf curling. Spores are borne on the concave surface of blistered areas and may be seen with the aid of a hand lens. Some insects may cause leaf malformations similar to those caused by the genus *Taphrina*.

**LIFE CYCLE.** Active Stage: Germ tubes from spores penetrate young leaves directly through the cuticle. The fungus grows initially in the cuticular layer. Later the hyphae penetrate the parenchymous tissue and grow intercellularly. Chlamydospores (ascogenous cells) form between epidermal wall and cuticle. These spores develop into asci which push through the cuticle. Resting Stage: Most authorities agree that this fungus overwinters as a resting spore on buds, twigs, and branches of host plants.



CONTROL. When control is warranted, spray with basic copper sulfate at bud break and twice after that at 14-day intervals.

References Used.

- Walker, J. C. 1957. Plant Pathology, p. 307-311. McGraw-Hill Book Co., New York.  
Alexopoulos, C. J. 1956. Introductory mycology, p. 212-216. John Wiley & Sons,  
New York.